

Paper AEC1 (b): ENVIRONMENTAL SCIENCE

Hours Per Week: 2

Exam Hours: 1 ½

Credits: 2

Marks: 40U+10I

Objective: to understand the importance of Environment, biodiversity, Environmental pollution.

UNIT - I : ECOSYSTEM, BIODIVERSITY & NATURAL RESOURCES :

1. Definition, Scope & Importance of Environmental Studies.
2. Structure of Ecosystem – Abiotic & Biotic components Producers, Consumers, Decomposers, Food chains, Food webs, Ecological pyramids)
3. Function of an Ecosystem :Energy flow in the Ecosystem (Single channel energy flow model)
4. Definition of Biodiversity , Genetic, Species & Ecosystem diversity , Hot-spots of Biodiversity, Threats to Biodiversity , Conservation of Biodiversity (Insitu & Exsitu)
5. Renewable & Non – renewable resources, Brief account of Forest , Mineral & Energy (Solar Energy & Geothermal Energy) resources
6. Water Conservation, Rain water harvesting & Watershed management.

UNIT – II : ENVIRONMENTAL POLLUTION , GLOBAL ISSUES & LEGISLATION :

**(15
hrs.)**

1. Causes, Effects & Control measures of Air Pollution, Water Pollution
2. Solid Waste Management
3. Global Warming & Ozone layer depletion.
4. Ill – effects of Fire- works
5. Disaster management – floods, earthquakes & cyclones
6. Environmental legislation :-
(a) Wild life Protection Act (b) Forest Act (c) Water Act (d) Air Act
7. Human Rights
8. Women and Child welfare
9. Role of Information technology in environment and human health

FIELD STUDY:

Pond Ecosystem
Forest Ecosystem

(5 hrs.)

SUGGESTED BOOKS :

1. Environmental Studies - from crisis to cure – by R. Rajagopalan (Third edition) Oxford University Press.
2. Text book of Environmental Studies for undergraduate courses (second edition) by Erach Bharucha
3. A text book of Environmental Studies by Dr.D.K.Asthana and Dr. Meera Asthana
4. Environmental Studies (2019), R Venkateswara Rao, HPH